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TITLE: Durable adhesive-based ink-printed polyolefin nonwovens

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Brief Summary Text - BSTX (10):

The present invention is directed to a durable, adhesive-based ink-printed nonwoven and a process for forming the same. The process first involves positioning a polyolefin nonwoven web such that it is capable of receiving a printing pattern on at least one surface of the nonwoven web. Next an adhesive-based ink is applied to the surface of the nonwoven web and then allowed to dry so as to yield an adhesive-based ink-printed nonwoven web with a crock value of 4 or greater. If ink printing equipment is being used to apply the adhesive-based ink to the nonwoven, then the process may further include the step of first transferring the adhesive-based ink to a transfer surface on the ink printing equipment and then transferring the adhesive-based ink to the nonwoven substrate. Furthermore, to speed up the process, heat may be applied to the printed nonwoven to hasten drying. The adhesive-based ink includes a binder selected from the group consisting of water-based, solvent-based and hot-melt adhesives with the adhesive-based ink having a viscosity of between about 50 and 10,000 centipoise during application. The adhesive-based ink further includes a pigment with a binder to pigment ratio of between about 10:1 and 1:1 on a dry weight basis of the total solids content in the adhesive-based ink. Examples of suitable binder materials include **polyvinyl alcohol, ethylene vinyl acetate,** and water-based acrylic copolymers. To aid in the application of the adhesive-based ink to the nonwoven substrate, the adhesive-based ink may further include a tackifying agent such as polyterpene or a rosin ester. When the **binder is a water**-based material a surfactant may also be used. In addition, both **foaming** agents and plasticizers may be used in the adhesive-based ink formulation.